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EXAMINER	
LEE IV, THOMAS E	
ART UNIT	PAPER NUMBER
2447	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,943	BORDES ET AL.	
	Examiner	Art Unit	
	THOMAS LEE	2447	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-13* is/are rejected.

7)☒ Claim(s) *6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *5/30/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/30/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 are pending.

Claim Objections

2. Claims 1-13 are objected to because of the following informalities:

- Claim 1, line 1 states "Device" and should state "A device";
- Claim 1, line 4 states "- means" and should state "means";
- Claim 1, line 6 states "throughputs," and should state "throughputs;";
- Claim 1, line 7 states "- means" and should state "means";
- Claim 1, line 7 "obtained to a system" is not clear and needs to be specified;
- Claim 1, line 8 states "network," and should state "network;";
- Claim 1, line 9 states "- means" and should state "means";
- Claim 1, line 10 states "said stream entities" and should state "said data stream entities";
- Claim 1, line 10 states "database," and should state "database;";
- Claim 1, line 11 states "- means" and should state "means";
- Claim 1, line 12 states "said entities to another of said entities" and should state "said data stream entities to another of said data stream entities";
- Claim 1, line 13 states "wherein" and should state "wherein:";
- Claim 1, line 15 states "- said" and should state "said";

- Claim 1, line 16 states "the sending system" and should state "said means of transfer";
- Claim 1, line 17 states “stream,” and should state “stream;”;
- Claim 1, line 18 states “- said” and should state “said”;
- Claim 1, line 19 states “said entities” and should state “said data stream entities”;
- Claim 1, line 20 states “said entities” and should state “said data stream entities”;
- Claim 1, line 21 states “the stream” and should state “the continuous stream”;
- Claim 1, line 25 states “entity, and” and should state “entity; and”;
- Claim 1, line 26 states “- said” and should state “said”;
- Claim 1, line 27 states “said codes” and should state “said error correction codes”;
- Claim 2, line 1 states “Preparation” and should state “The preparation”;
- Claim 2, line 2 “it” is not clear and needs to be specified;
- Claim 3, line 1 states “Preparation” and should state “The preparation”;
- Claims 3, line 3 states “said codes” and should state “said error correction codes”;
- Claim 4, line 1 states “Preparation” and should state “The preparation”;
- Claim 4, line 4 “in that” is superfluous and may cause the claim to be unclear;

- Claim 4, line 6 states "that is currently sending." and should state "currently being sent.";
- Claim 5, line 1 states "Preparation" and should state "The preparation";
- Claim 6, line 1 states "Preparation" and should state "The preparation";
- Claims 6, line 3 states "said codes" and should state "said error correction codes";
- Claim 7, line 1 states "Preparation" and should state "The preparation";
- Claim 8, line 1 states "Server" and should state "A server";
- Claim 8, line 2 "it" is unclear and needs to be specified;
- Claim 8, line 4 states "said device" and should state "said data preparation device";
- Claim 8, line 5 states "- means" and should state "means";
- Claim 8, line 7 states "throughputs," and should state "throughputs;";
- Claim 8, line 8 states "- means" and should state "means";
- Claim 8, line 8 "obtained to a system" is not clear and needs to be specified;
- Claim 8, line 9 states "network," and should state "network;";
- Claim 8, line 10 states "- means" and should state "means";
- Claim 8, line 10-11 states "said stream entities" and should state "said data stream entities";
- Claim 8, line 11 states "database," and should state "database;";
- Claim 8, line 12 states "- means" and should state "means";

- Claim 8, line 12-13 states “said entities to another of said entities” and should state “said data stream entities to another of said data stream entities”;
- Claim 8, line 14 states “- means” and should state “means”;
- Claim 8, line 14-15 states "the sending system" and should state "said means of transfer";
- Claim 8, line 15 states “stream,” and should state “stream;”;
- Claim 8, line 16 states “- said” and should state “said”;
- Claim 8, line 17 states “said entities” and should state “said data stream entities”;
- Claim 8, line 18 states “said entities” and should state “said data stream entities”;
- Claim 8, line 19 states “the stream” and should state “the continuous stream”;
- Claim 8, line 22 states “entity, and” and should state “entity; and”;
- Claim 8, line 23 states “- said” and should state “said”;
- Claim 8, line 27 states “said codes” and should state “said error correction codes”;
- Claim 9, line 1 states “Server” and should state “The server”;
- Claim 9, line 2 “it” is not clear and needs to be specified;
- Claim 10, line 1 states “Method” and should state “A method”;
- Claim 10, line 4 states “- said” and should state “said”;

- Claim 10, line 7 states “said stream entities," and should state "said data stream entities;";
- Claim 10, line 8 states “- said” and should state “said”;
- Claim 10, line 9 states “network,” and should state “network;”;
- Claim 10, line 10 “- and there is a switch” is unclear and should be specified;
- Claim 10, line 10 states “said entities to another of said entities” and should state “said data stream entities to another of said data stream entities”;
- Claim 10, line 12 states “wherein” and should state “wherein:”;
- Claim 10, line 14 states “- error” and should state “error”;
- Claim 10, line 16 states "the sending system" and should state "said means of transfer";
- Claim 10, line 15-16 states “stream,” and should state “stream;”;
- Claim 10, line 17 “- there is a switch” is unclear and should be specified;
- Claim 10, line 17 states “said entities” and should state “said data stream entities”;
- Claim 10, line 18 states “said entities” and should state “said data stream entities”;
- Claim 10, line 19 states “the stream” and should state “the continuous stream”;

- Claim 10, line 23 states “entity, and” and should state “entity; and”;
- Claim 10, line 24 states “- the” and should state “the”;
- Claim 10, line 24 states “said codes” and should state “said error correction codes”;
- Claim 11, line 1 states “Computer” and should state “A computer”;
- Claim 11, line 2 state "the steps of the method" and should state "steps of a method";
- Claim 11, line 4 states “program” and should state "program code";
- Claim 11, line 5 states “wherein” and should state “wherein:”;
- Claim 11, line 6 states “- said” and should state “said”;
- Claim 11, line 8-9 states “said stream entities," and should state "said data stream entities;";
- Claim 11, line 10 states “- said” and should state “said”;
- Claim 11, line 11 states “network,” and should state “network;”;
- Claim 11, line 12 “- and there is a switch” is unclear and should be specified;
- Claim 11, line 12 states “said entities to another of said entities” and should state “said data stream entities to another of said data stream entities”;
- Claim 11, line 14 states “wherein” and should state “wherein:”;
- Claim 11, line 15 states “- error” and should state “error”;

- Claim 11, line 15-16 states "the sending system" and should state "said means of transfer";
- Claim 11, line 16 states "stream," and should state "stream;";
- Claim 11, line 17 "- there is a switch" is unclear and should be specified;
- Claim 11, line 17 states "said entities" and should state "said data stream entities";
- Claim 11, line 18 states "said entities" and should state "said data stream entities";
- Claim 11, line 19 states "the stream" and should state "the continuous stream";
- Claim 11, line 22 states "entity, and" and should state "entity; and";
- Claim 11, line 23 states "- said" and should state "said";
- Claim 11, line 24 states "said codes" and should state "said error correction codes";
- Claim 12, line 1 states "Server" and should state "The server";
- Claim 12, line 1 "that" is superfluous and may cause the claim to be unclear;
- Claim 12, line 1 "it" is not clear and needs to be specified;
- Claim 13, line 1 states "Method" and should state "A method";
- Claim 13, line 1 "it" is not clear and needs to be specified;
- Claim 13, line 5 states "- means" and should state "means";

- Claim 13, line 7 states “throughputs,” and should state “throughputs;”;
- Claim 13, line 8 “obtained to a system” is not clear and needs to be specified;
- Claim 13, line 10 states “- means” and should state “means”;
- Claim 13, line 11 states “database,” and should state “database;”;
- Claim 13, line 12 states “- means” and should state “means”;
- Claim 13, line 12-13 states “said entities to another of said entities” and should state “said data stream entities to another of said data stream entities”;
- Claim 13, line 14 states “- means” and should state “means”;
- Claim 13, line 14-15 states "the sending system" and should state "said means of transfer";
- Claim 13, line 15 states “stream,” and should state “stream;”;
- Claim 13, line 16 states “- said” and should state “said”;
- Claim 13, line 17 states “said entities” and should state “said data stream entities”;
- Claim 13, line 18 states “said entities” and should state “said data stream entities”;
- Claim 11, line 19 states “the stream” and should state “the continuous stream”;
- Claim 11, line 22 states “entity, and” and should state “entity; and”;
- Claim 11, line 23 states “- said” and should state “said”; and

- Claim 11, line 24 states "said codes" and should state "said error correction codes".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-9 and 11-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-7, the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

With respect to claims 8-9 and 12, the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

With respect to claim 11, the claim lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. 101. The claim is clearly not a series of steps or acts to be a process nor a combination of

chemical compounds to be a composition of matter. As such, the claim fails to fall within a statutory category. The claim is, at best, functional descriptive material *per se*.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 provides for the use of preparing data to be sent in a continuous stream, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 4-5, 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al. ("Streaming Video over the Internet: Approaches and Directions", 3 March 2001, retrieved from http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=911156&isnumber=19666 on 9 February 2009).

With respect to claim 1, Wu teaches a device for the preparation of data to be sent in a continuous stream to at least one receiver via a communication network (i.e., a client, or receiver, acts to receive streaming video sent over the internet from a server, section 1 and figure 1), said device comprising means of obtainment of said data originating from a database (i.e., data is maintained in a structured format, teaching a database, for use in streaming, figure 1, Storage Device and section V, B), said database containing at least two data stream entities for data associated respectively with different transmission throughputs (i.e., streams can be encoded utilizing scalable encoders and the different levels stored on various disks, teaching two data stream entities, for different throughputs designated by rate shaping, section II and section III, A, 2 Rate Shaping); means of transfer of said data obtained to a system for sending said data as a continuous stream over said network (i.e., the streaming server utilizes

transport protocols to send the data over the internet, figure 9 and section III, A, 2 Rate Shaping); means of connection of said means of obtainment to one of said stream entities of the database (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), and means of switching of the means of connection from one of said entities to another of said entities (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), wherein said preparation device comprises means of regular addition to said data transferred to the sending system, of error correction codes so as to form an augmented data stream (i.e., error control mechanism are utilized to continually add error codes to the streams being sent, thus forming an augmented data stream, section III, B), said means of switching being designed to switch the means of connection from a first of said entities, associated with a first sending throughput, to a second of said entities, associated with a second sending throughput greater than said first sending throughput, when the stream of said data transferred augmented with said added error correction codes reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (i.e., the rate shaper switches to add different layers as the throughput provides the available bandwidth based on the feedback

associated with the stream, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9), and said means of addition being designed to reinitialize the addition of said codes to said initial input upon the switching of said first entity to said second entity (i.e., upon switching streams the FEC is initialized for the block of data sent, section III, B).

With respect to claim 2, Wu teaches the preparation device according to Claim 1, wherein it comprises means of automatic throughput regulation capable of reducing the quantity of said codes added upon detection of risk of congestion (i.e., the number of streams output, and associated FEC codes, are limited when congestion is detected, thus teaching reducing the quantity of said codes added upon detection of risk of congestion, section III, A, 1 Rate Control and 2 Rate Shaping, section III, B, figure 7a, and figure 9).

With respect to claim 4, Wu teaches the preparation device according to claim 1, wherein said means of connection are designed to select one of said entities as a function of a throughput preset modifiable over time and in that said means of addition are designed to be activated when said selected entity is associated with a sending throughput greater than the sending throughput of another of said entities that is currently sending (i.e., the throughput is set according to feedback and further adjusted when sending a video stream, teaching being preset, and able to be adjusted by sending more layers via the rate shaper as the video is streamed with additional FEC codes added, teaching activated when associated with a throughput greater, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9).

With respect to claim 5, Wu teaches the preparation device according to claim 1, wherein said means of obtainment are capable of obtaining at least one of said entities by superimposing on another of said entities at least one data stream layer available in the database (i.e., the data throughput may be increased by adding another layer to the stream, teaching superimposing on another of said entities, section II and section III, A, 2).

With respect to claim 7, Wu teaches the preparation device according to claim 1, wherein characterized in that said means of switching are capable of switching the means of connection of one of the entities currently sending, associated with a nominal current sending throughput to another of the entities, associated with a nominal fallback sending throughput that is lower than the current nominal throughput, upon detection of risk of congestion (i.e., the data throughput may be decreased by removing a layer from the stream for congestion management, section II and section III, A, 2).

With respect to claim 8, Wu teaches a server of data, wherein it comprises a data preparation device to be sent in a continuous stream to at least one receiver via a communication network (i.e., a client, or receiver, acts to receive streaming video sent over the internet from a server, section 1 and figure 1), said device comprising means of obtainment of said data originating from a database (i.e., data is maintained in a structured format, teaching a database, for use in streaming, figure 1, Storage Device and section V, B), said database containing at least two data stream entities for data associated respectively with different transmission throughputs (i.e., streams can be encoded utilizing scalable encoders and the different levels stored on various disks,

teaching two data stream entities, for different throughputs designated by rate shaping, section II and section III, A, 2 Rate Shaping), means of transfer of said data obtained to a system for sending said data as a continuous stream over said network (i.e., the streaming server utilizes transport protocols to send the data over the internet as a stream, figure 9 and section III, A, 2 Rate Shaping), means of connection of said means of obtainment to one of said stream entities of the database (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), means of switching of the means of connection from one of said entities to another of said entities (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), means of regular addition to said data transferred to the sending system, of error correction codes so as to form an augmented data stream (i.e., error control mechanism are utilized to continually add error codes to the streams being sent, thus forming and augmented data stream, section III, B), said means of switching being designed to switch the means of connection from a first of said entities, associated with a first sending throughput, to a second of said entities, associated with a second sending throughput greater than said first sending throughput, when the stream of said data transferred augmented with said added error correction codes reaches a threshold throughput equal to the sum of the second sending throughput and

of an additional throughput associated with an initial input of error correction codes for said second entity (i.e., the rate shaper switches to add different layers as the throughput provides the available bandwidth based on the feedback associated with the stream, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9), and said means of addition being designed to reinitialize the addition of said codes to said initial input upon the switching of said first entity to said second entity (i.e., upon switching streams the FEC is initialized for the block of data being sent, section III, B).

With respect to claim 9, Wu teaches the server of data according to Claim 8, wherein it is designed to send data over an IP network, in accordance with the RTP and UDP protocols utilized jointly (i.e., RTP may be implemented on top of UDP to send the data via an IP network, section VII and figure 20).

With respect to claim 10, Wu teaches a method for the preparation of data to be sent in a continuous stream to at least one receiver via a communication network (i.e., a client, or receiver, acts to receive streaming video sent over the internet from a server, section 1 and figure 1), according to which said data originating from a database are obtained (i.e., data is maintained in a structured format, teaching a database, for use in streaming, figure 1, Storage Device and section V, B), said database containing at least two data stream entities for data associated respectively with different transmission throughputs (i.e., streams can be encoded utilizing scalable encoders and the different levels stored on various disks, teaching two data stream entities, for different throughputs designated by rate shaping, section II and section III, A, 2 Rate Shaping), by extracting said data from one of said stream entities, said data obtained are

transferred to a system sending said data as a continuous stream over said network (i.e., the streaming server utilizes transport protocols to send the data over the internet as one stream, teaching continuous, of data, figure 9 and section III, A, 2 Rate Shaping), and there is a switch from one of said entities to another of said entities to obtain said data (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), wherein error correction codes are added regularly to said data transferred to the sending system, so as to form an augmented data stream (i.e., error control mechanism are utilized to continually add error codes to the streams being sent, thus forming an augmented data stream, section III, B), there is a switch from a first of said entities, associated with a first sending throughput, to a second of said entities, associated with a second sending throughput greater than the first sending throughput, when the stream of said data transferred augmented with said added error correction codes reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (i.e., the rate shaper switches to add different layers as the throughput provides the available bandwidth based on the feedback associated with the stream, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9), and the addition of said codes to said initial input is reinitialized when switching from said first entity to said second entity (i.e., upon switching streams the FEC is initialized for the block of data being sent, section III, B).

With respect to claim 11, Wu teaches computer program product comprising program code instructions for the execution of the steps of the method for the preparation of data to be sent in a continuous stream to at least one receiver via a communication network (i.e., a client, or receiver, acts to receive streaming video sent over the internet from a server, section 1 and figure 1), when said program is executed on a computer, wherein said data originating from a database are obtained (i.e., data is maintained in a structured format, teaching a database, for use in streaming, figure 1, Storage Device and section V, B), said database containing at least two data stream entities for data associated respectively with different transmission throughputs (i.e., streams can be encoded utilizing scalable encoders and the different levels stored on various disks, teaching two data stream entities, for different throughputs designated by rate shaping, section II and section III, A, 2 Rate Shaping), by extracting said data from one of said stream entities, said data obtained are transferred to a system sending said data as a continuous stream over said network (i.e., the streaming server utilizes transport protocols to send the data, which has been received, teaching extracted, from the storage device, and the data is further sent over the internet, figure 9 and section III, A, 2 Rate Shaping), and there is a switch from one of said entities to another of said entities to obtain said data (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), and wherein error correction codes are added regularly to said data transferred to the sending system, so as to form an

augmented data stream (i.e., error control mechanism are utilized to continually add error codes to the streams being sent, thus forming an augmented data stream, section III, B), there is a switch from a first of said entities, associated with a first sending throughput, to a second of said entities, associated with a second sending throughput greater than the first sending throughput, when the stream of said data transferred augmented with said added error correction codes reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (i.e., the rate shaper switches to add different layers as the throughput provides the available bandwidth based on the feedback associated with the stream, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9), and the addition of said codes to said initial input is reinitialized when switching from said first entity to said second entity (i.e., upon switching streams the FEC remains initialized for the block of data sent, section III, B).

With respect to claim 12, Wu teaches a server according to Claim 8, wherein that it is a server of video data (i.e., the server sends video, figure 1).

With respect to claim 13, Wu teaches a method according to claim 10, wherein it is designed to be implemented by means of a device for the preparation of data to be sent in a continuous stream to at least one receiver via a communication network (i.e., a client, or receiver, acts to receive streaming video sent over the internet from a server, section 1 and figure 1), said device comprising means of obtainment of said data originating from a database (i.e., data is maintained in a structured format, teaching a

database, for use in streaming, figure 1, Storage Device and section V, B), said database containing at least two data stream entities for data associated respectively with different transmission throughputs (i.e., streams can be encoded utilizing scalable encoders and the different levels stored on various disks, teaching two data stream entities, for different throughputs designated by rate shaping, section II and section III, A, 2 Rate Shaping), means of transfer of said data obtained to a system for sending said data as a continuous stream over said network (i.e., the streaming server utilizes transport protocols to send the data over the internet, figure 9 and section III, A, 2 Rate Shaping), means of connection of said means of obtainment to one of said stream entities of the database (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), means of switching of the means of connection from one of said entities to another of said entities (i.e., the rate shaper provides the video from the storage device, based on the rate necessary, for transport by dropping different encoded rates working above the compression layer, thus at the stream layer, for a layer-dropping filter, figure 9 and section III, A, 2 Rate Shaping), means of regular addition to said data transferred to the sending system, of error correction codes so as to form an augmented data stream (i.e., error control mechanism are utilized to continually add error codes to the streams being sent, thus forming an augmented data stream, section III, B), said means of switching being designed to switch the means of connection from a first of said entities, associated with a first sending throughput, to a

second of said entities, associated with a second sending throughput greater than said first sending throughput, when the stream of said data transferred augmented with said added error correction codes reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (i.e., the rate shaper switches to add different layers as the throughput provides the available bandwidth based on the feedback associated with the stream, section III, A, 1 Rate Control and 2 Rate Shaping, figure 7a, and figure 9), and said means of addition being designed to reinitialize the addition of said codes to said initial input upon the switching of said first entity to said second entity (i.e., upon switching streams the FEC remains initialized for the block of data sent, section III, B).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. ("Streaming Video over the Internet: Approaches and Directions", 3 March 2001, retrieved from

http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=911156&isnumber=19666 on 9

February 2009) in view of Giancola et al. ("A Novel Approach to Error Protection in Medium Access Control Design", 10 December 2002, retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1045785 on 9 February 2009).

With respect to claim 3, Wu teaches the preparation device according to Claim 2, wherein said means of automatic throughput regulation are designed to reinitialize to zero the video stream additional layers upon detection of risk of congestion (i.e., the rate shaper can provide the video based on layers, and depending on available throughput drop different layers when detecting limited throughput, section III, A). Wu does not explicitly disclose to reduce the number of said codes upon detection of risk of congestion. However, Giancola teaches to reduce the number of said codes upon detection of risk of congestion (i.e., the FEC codes are reduced, and initialized to zero, to maintain a maximum throughput depending on congestion as determined by RTT, section 2.2.2 and figure 1), in order to efficiently manage the available transmission resource by managing the overhead produced by FEC bits (Giancola, section 1, paragraph 1 and section 2.2.1, paragraph 1). Therefore, based on Wu in view of Giancola, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Giancola to the system of Wu in order to efficiently manage the available transmission resource by managing the overhead produced by FEC bits.

Allowable Subject Matter

11. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS LEE whose telephone number is (571) 270-7292. The examiner can normally be reached on Monday to Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Hwang can be reached on (571) 272-4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Lee/
Art Unit 2447
10 February 2009

/Joon H. Hwang/
Supervisory Patent Examiner, Art Unit 2447